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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,061	09/25/2003	Joel Howard Schopp	AUS920030450US1	5834

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EXAMINER

PHAN, RAYMOND NGAN

ART UNIT	PAPER NUMBER
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2111

MAIL DATE	DELIVERY MODE
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10/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/671,061

Applicant(s)

SCHOPP, JOEL HOWARD

Examiner

Raymond Phan

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 12, 13, 15, 23, 24 and 26 is/are rejected.
- 7) ☒ Claim(s) 3, 5-11, 14, 16-22, 25 and 27-33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Part III DETAILED ACTION

Notice to Applicant(s)

1. This action is responsive to the following communications: amendment filed on November 14, 2006.
2. This application has been examined. Claims 1-33 are pending.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 4, 12-13, 15, 23-24, 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants Admitted Prior Arts (hereinafter AAPA) in view of Govindaraju et al. (US No. 6,112,222).

In regard to claims 1, 12, 23, AAPA discloses a method for managing a mutex in a data processing system, the method comprising: attempting to acquire the mutex by a first thread (see figure 3); and in response to a determination that the mutex has already been acquired by a second thread, determining to enter a spin state or a sleep state on the first thread (see figure 3). But AAPA does not disclose the step of maintaining an average acquisition cost value for a mutex; and determining to enter a spin state or a sleep state on the first thread based on the average acquisition cost value for the mutex. However Govindaraju et al. disclose

the step of maintaining an average acquisition cost value (i.e. count) for a mutex (see col. 6, lines 29-43); and determining to enter a spin state or a sleep state on the first thread based on the average acquisition cost value for the mutex (see col. 6, lines 44-54). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Govindaraju et al. within the system of AAPA because it would reduce the excessive period of time waiting for the thread requests.

In regard to claims 2, 13, 24, Govindaraju et al. disclose wherein the average acquisition cost value indicates an average consumption of computational resources by threads in acquiring the mutex (see col. 6, lines 29-43). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Govindaraju et al. within the system of AAPA because it would reduce the excessive period of time waiting for the thread requests.

In regard to claims 4, 15, 26, Govindaraju et al. disclose the step of entering a spin state if the average acquisition cost value satisfies a first condition (see col. 5, lines 19-45); and entering a sleep state if the average acquisition cost value satisfies a second condition (see col. 6 lines 29-43). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Govindaraju et al. within the system of AAPA because it would reduce the excessive period of time waiting for the thread requests.

Allowable Subject Matter

6. Claims 3, 5-11, 14, 16-22, 25, 27-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent

form including all of the limitations of the base claim and any intervening claims.

7. The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 3, 5, 7, 14, 16, 18, 25, 27, 29 are allowable over the prior art of record because the prior arts, cited in its entirety, or in combination, do not teach discloses the step of maintaining a thread-specific current acquisition cost value that represents a consumption of computational resources by the first thread after an initial attempt to acquire the mutex and prior to acquiring the mute; and in response to the first thread acquiring the mutex, recomputing the average acquisition cost value for the mutex to include the thread-specific current acquisition cost value (claims 3, 14, 25); wherein the first condition is that the average acquisition cost value is less than a threshold value, and wherein the second condition is that the average acquisition cost value is greater than or equal to a threshold value (claims 5, 16, 27); the step of entering a spin state or a sleep state on the first thread; and after exiting the spin state or the sleep state on the first thread, computing or retrieving a cost value that indicates a consumption of computational resources by the first thread during the spin state or the sleep state (claims 7, 18, 29).

Response to Amendment

8. Applicant's arguments, see pages 10-13, filed November 14, 2006, with respect to the rejection of claims 1-2, 4, 12-13, 15, 23-24, 26 under 35USC103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Govindaraju et al.

Conclusion

9. Claims 1-2, 4, 12-13, 15, 23-24, 26 are rejected. Claims 3, 5-11, 14, 16-22, 25, 27-33 are objected.
10. The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure.

Miyamoto et al. (US No. 6,101,569) disclose a computer resources access control apparatus and method.

copeland et al. (US No. 6,752,836) disclose a method and apparatus for high concurrency client locking with JAVA in a data processing system.

Periwal et al. (US No. 5,644,768) disclose a systems and methods for sharing resources in a multi-user environment.

Harres (US No. 6,886,081) discloses a method and tool for determining ownership of a multiple owner lock in multithreading environments.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Raymond Phan, whose telephone number is (571) 272-3630. The examiner can normally be reached on Monday-Friday from 6:30AM- 4:00PM. The Group Fax NO. 571-273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [raymond.phan@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 central telephone number is (571) 272-2100.



**Raymond Phan
Patent Examiner
Tech Center 2100**